

REMARKS

There were 44 claims in the original application numbered 1 – 44. There were 3 claims added in a response to a first Office Action bringing the total claims to 47. Following this Office Action response there are 47 claims numbered 1 – 47. There are 3 independent claims and 44 dependent claims. Claims 1, 22 and 43 are the independent claims. Claims 2 – 21, 23 – 42, and 44 – 47 are the dependent claims. Claims 2 – 5, 7 – 21, 23 – 26, 28 – 42 (Original), claims 1, 6, 22 and 27 (Currently amended), and claims 43 – 47 (previously presented).

Reconsideration of the claims argued herein is respectfully requested.

The § 102 Rejections

The Office Action rejects claims 1 – 5, 8 – 14, 16 – 19, 21 – 26, 29, 33 – 35, 37 – 40, 42 under 35 U.S.C. 102(e) as being anticipated by French, U.S. Patent No. 6,341,312. Applicant respectfully traverses the rejection.

French teaches a change to the client side code that enables users to reconnect after they are disconnected. The reconnection requirements that would be necessary at the start of a first session are effected without user participation in that no

security challenge appears to the user and devices previously connected to by the user are reconnected.

Conversely, applicant's invention executes code at the server that enables a CIFS session to be maintained through a server takeover or server reboot. This is intended to ensure there is no I/O disconnect, lost data, or corrupted files. The invention executes code at the server that ensures the connection with the client device should never be lost. The emphasis is on a highly available server resource. Thus, if the server fails, the CIFS session can be maintained until the failed server has recovered or another server takes its place.

Claim 1

At paragraph 5 of page 3 the Office Action states that "As to claim 1, French teaches a method of operating a file server, comprising the steps of: receiving a CIFS request (CIFS client access network files system, col. 3 lines 25 – 50); recording state at that time about the request (state information with respect to which the user is connecting, col. 5 lines 35 – col. 6 line 10); restoring state upon reboot as last recorded (reconnect without requiring the user to re-enter information, col. 5 and col. 6 lines 1-26); attempting to continue the CIFS session that the request was part of (reestablish the connections, replays the connections, col. 6 lines 20 – 48)."

Claim 1, as amended, is repeated below for the convenience of the Examiner.

1. (currently amended) A method of operating a file server, comprising the steps of:
receiving a CIFS request at said file server; and
recording a state at said file server at that the time of said receiving about the request, said state including information regarding a persistent connection between said server and a client device; restoring said state of said file server upon reboot as last recorded; and
attempting to continue the CIFS session between at least one said client device and said file server that the request was part of.

Claim 1, as amended, states “recording state at said file server at that time about the request, said state including information regarding a persistent connection between said server and a client device; and”. At col. 6, lines 40 – 45, French states in part that “Generally, the data structures identifying the persistent connections are stored in RAM in the client machine.” Claim 1 of Applicant’s invention claims storage of such state information at the server. French neither teaches nor discloses recording state at the server where said state includes information regarding a persistent connection between the server and client devices, thus French does not teach the invention as recited by claim 1.

Page 11, item (1) and page 13, paragraph 1 of the Office Action states that Applicant argued that Applicant's invention executes code at the server while French uses client side execution, but that the Examiner did not find support for this in the independent claims. Applicant has amended claim 1 to more clearly claim this attribute. Applicant believes that text pertinent to figures 2 – 5 in the specification of Applicant's application contain ample support for claim 1 as amended.

Page 11, item (2) and page 13, paragraph 2 of the Office Action states that “Applicant argued that French does not disclose a method for continuing a CIFS session that the request was a part of following restoration of state to a server upon reboot...that French teaches a new session...” The Office Action then points Applicant to two sections of text supporting a contrary view.

Firstly, the Office Action directs Applicant to col. 6, lines 40 – 48. Applicant has argued previously in this response that French is manipulating code at the client while Applicant's invention uses state and code executed at the server.

Secondly, the Office Action directs Applicant to col. 6, lines 20 – 48. Lines 28 – 38 concern French's ability to maintain a persistent connection upon user logoff. Applicant's invention does not manipulate code on the client side. If a user logs off, the connection is lost. Applicant's invention is concerned with one or more highly available

servers. This is achieved by executing code on the server side such that a client device never experiences a session loss even if the server temporarily fails or is substituted with an alternate server.

The Office Action also states that “Reestablish” or “replay” means continue and cannot be read as creating a new session. Applicant respectfully disagrees. At col. 6, line 9, French explains “how a user is transparently reconnected to a network device following an interruption of the network connection.” When French is read in this context, without any server code manipulation to maintain the current session, Applicant believes that when the client device replays the connections it does create a new session.

French is not seen to disclose a method for continuing a CIFS session that a request was part of following restoration of state to a server upon reboot. Thus, the applied art is not seen to disclose or to suggest the features of claim 1, at least with respect to continuing a CIFS session that a request was part of.

For at least the foregoing reasons it is believed that claim 1 is allowable over French.

Claim 2 - 5

Claims 2 - 5 depend from claim 1. For at least this reason and those stated regarding claim 1, it is believed that claims 2 - 5 are allowable over French.

Claim 8

In regard to claim 8, the Office Action states that “French teaches the step of recording state further comprises the step of determining whether the server shutdown was elective or non-elective (an interrupt...test outcome is negative or positive, col. 6 lines 10 – 20).

Claim 8 is repeated here for the convenience of the Examiner.

8. (original) The method of claim 1, wherein said step of recording state further comprises the step of determining whether said server shutdown was elective or non-elective.

The text of French cited in the Office Action describes Figure 5 of French. That figure illustrates the following as a flowchart: 1. User connected to device, 2. Connection interrupted? (if no, goto #1), 3. request client at protocol level, 4. Pass

security context to redirector. The text the Office Action refers to (both the flowchart and col. 6, lines 10 – 20) tests for an interrupted connection and not for a server shutdown as is claimed in Applicant's invention. French does state that "An interruption may occur across the entire connection, due to a power failure, server failure or the like."; however, French tests for an interruption of the connection and not for a server failure as claimed by the Applicants. French is not seen to disclose or suggest the feature of claim 8 at least with respect to recording state of a server failure, thus French does not teach the invention as recited by claim 8.

Furthermore, claim 8 claims recording state as to whether the server shutdown was elective or nonelective. French tests only of whether an interruption of the connection has occurred and not a test for whether a server shutdown has specifically occurred and if it was an elective or nonelective server shutdown. French is not seen to disclose or suggest the feature of claim 8 at least with respect to recording state of a server failure being elective or nonelective, thus French does not teach the invention as recited by claim 8.

For at least these reasons it is believed that claim 8 is allowable over French. Also, claim 8 depends directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 8 is allowable over French.

Claim 9

Claim 9 depends from claim 8 and indirectly from claim 1. For at least these reasons and the reasons cited incident to claims 8 and 1, it is believed that claim 9 is allowable over French.

Claims 10 and 11

Claims 10 and 11 depend from claim 9 and indirectly from claims 1 and 9. For at least these reasons and the reasons cited incident to claims 9, 8 and 1, it is believed that claims 10 and 11 are allowable over French.

Claims 12 and 16

With regard to claims 12 and 16, the Office Action states that “French teaches the step of recording state further comprises the step of determining whether recovery will be accomplished by rebooting the affected server (the machine is rebooted, col. 6 lines 40 – 45) or takeover by another server.”

The text identified by the Office Action states that “...the persistent connections are stored in RAM in the *client machine* (emphasis added)...these structures

may be saved to disk such that when the machine is rebooted, the mechanism can reestablish the connections automatically prior to logon.” French is discussing rebooting the client device not the server device as Applicant claims. Applicant can find no mention of a take-over in this portion of text, let alone a take-over of one sever by another. French neither teaches nor discloses the feature of claim 12 storing state that further comprises the step of determining whether recovery will be accomplished by rebooting the affected server or takeover by another server, thus French does not teach the invention as recited by claims 12 and 16.

For at least these reasons it is believed that claims 12 and 16 are allowable over French. Also, claims 12 and 16 depend directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claims 12 and 16 are allowable over French.

Claim 13 and 17

Applicant has previously argued these issues with respect to those arguments directed to claims 8 and 9. For at least these reasons it is believed that claims 13 and 17 are allowable over French. Also, claims 13 and 17 depend indirectly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claims 13 and 17 are allowable over French.

Claim 14

Please see arguments directed toward claims 8 and 9. For at least these reasons it is believed that claim 14 is allowable over French. Also, claim 14 depends indirectly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claims 14 is allowable over French.

Claim 18

With regard to claim 18, the Office Action states “French teaches wherein the reboot comprises the steps of: rebooting the affected server’s operating system (the machine is rebooted, col. 6 lines 40 – 45); and rebuilding in-memory data structures (inherent when the data structures is saved in a disk such that when the machine is rebooted, col. 6 lines 40 – 48) to the state prior to the reboot.”

Applicant believes the text the Office Action cites is referring to a client machine reboot and not a server reboot. Indeed the text states in part “Generally, the data structures identifying the persistent connections are stored in RAM in the client machine...such that when the machine is rebooted, the mechanism can reestablish connections...” French neither teaches nor discloses the feature of claim 18 with regard

to rebooting the affected server's operating system, thus French does not teach the invention as recited by claim 18.

For at least these reasons it is believed that claim 18 is allowable over French. Also, claim 18 depend indirectly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 18 is allowable over French.

Claim 19

With reference to claim 19, Applicant respectfully directs Examiner to arguments previously stated in reference to claims 18, 16 and 1.

For at least these reasons it is believed that claim 19 is allowable over French. Also, claim 19 depends indirectly from claim 1 and for at least the reasons stated regarding these claims it is believed that claim 19 is allowable over French.

Claim 21

Claim 21 depends directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 21 is allowable over French.

Claims 22, 23 – 26, 29, 33 – 35, 37 – 40 and 42

These claims are apparatus claims corresponding to the method claims previously argued. With reference to these apparatus claims, Applicant respectfully requests Examiner see the arguments set forth to the corresponding method claims as follows:

As to claims 23 – 26, please see arguments directed to claim 1 above. Claims 23 – 26 depend from an apparatus claim containing essentially the same limitations as claim 1. For at least the reasons stated regarding claim 1 it is believed that claims 23 – 26 are allowable over the applied art.

As to claim 29, please see arguments directed to claim 8 above.

As to claims 33 – 35, please see arguments directed to claim 12.

As to claims 37 – 40, please see arguments directed to claims 16 and 18 above.

As to claim 42, please see arguments directed to claim 1 above. Claim 42 depends from an apparatus claim containing essentially the same limitations as claim 1.

For at least the reasons stated regarding claim 1 it is believed that claim 42 is allowable over the applied art.

The § 103 Rejections

Page 7 of the Office Action rejects claims 6, 7, 27, 28, and 30 – 32 under 35 U.S.C. 103(a), as being unpatentable over French, US patent no. 6,341,312 in view of Sakakura, US patent no. 6,334,139. Applicant hereby traverses the rejection.

Claims 6 and 7

With regard to claims 6 and 7, applicant has amended claim 1 to read in part “recording state at said file server...” Claim 6 depends from claim 1 and when read in the light of claim 1, Applicant believes the applied art is no longer of issue. As Applicant has previously argued, French does not teach or disclose recording state at the server as an elective reboot or elective takeover of a server. French appears to only teach a client device reboot, thus French does not teach the invention as recited by claims 6 and 7 and any teachings of Sakakura are moot with regards to claims 6 and 7

For at least these reasons it is believed that claims 6 and 7 are allowable over French in view of Sakakura.

As to claims 27 – 28, please see arguments directed to claims 6 and 7 above.

As to claim 30 – 32, please see arguments directed to claims 9 and 1 above (Section 102 rejections).

The § 103 Rejections (Continued)

Page 8 of the Office Action rejects claims 43 - 47 under 35 U.S.C. 103(a), as being unpatentable over Delaney, U.S. patent no. 5,996,086 in view of French, U.S. patent no. 6,341,312.

Claim 43

At page 9, paragraph 2, the Office Action states that “French teaches the step of attempting to continue any active CIFS session (reestablish the connections, replays the connections, col. 6 lines 20 – 48 ...[sic] and col. 3 lines 26 – 60). Applicant has already argued at length their belief that French does not in fact continue an existing session but instead attempts to start a new session by replaying connection parameters, such as, automatically entering passwords and selecting devices to connect to. French neither teaches nor discloses the feature of claim 43, at least with reference to attempting

to continue any active CIFS sessions and the combination of French with Delaney is immaterial due to French not teaching this feature of the invention.

For at least this reason claim 43 is believed to be allowable over Delaney in view of French.

Claims 44 – 47

Claims 44 – 47 depend directly from claim 43. For this reason and the reasons cited incident to claim 43, claims 44 – 47 are believed to be allowable over Delaney in view of French.

Page 8 of the Office Action rejects claims 15, 20, 36 and 41 under 35 U.S.C. 103(a), as being unpatentable over French, U.S. patent no. 6,341,312 in view of Delaney, U.S. patent no. 5,996,086.

Claims 15 and 36

Claim 15 depends indirectly from claim 1 (currently amended) and claim 36 is essentially claim 1 in apparatus form and it depends from claim 22 (currently amended). Applicant has previously argued the merits of claim 1 under the section 102

rejections. Chrabaszc is not seen by Applicant to remedy the argued deficiencies of French. Thus any arguments proposed by the Office Action using a combination of French and Chrabaszc are moot.

For at least these reasons claims 15 and 36 are believed to be allowable over French in view of Chrabaszc

Claims 20 and 41

Claim 20 depends indirectly from claim 1 (currently amended) and claim 41 is essentially claim 1 in apparatus form and depends from claim 22 (currently amended). Applicant has previously argued the merits of claim 1 under the section 102 rejections. French fails to contain the necessary features of the intervening claims due to the amended form, thus any arguments proposed by the Office Action using a combination of French and Chrabaszc is moot.

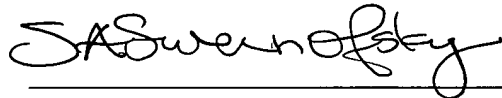
For at least these reasons claims 20 and 41 are believed to be allowable over French in view of Chrabaszc.

Request for Allowance

It is believed that this application is in condition for allowance. Applicants respectfully request reconsideration and allowance of this application.

If, in the opinion of the Examiner, an interview would expedite prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number shown below.

Respectfully submitted,



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